(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 23 December 2004 (23.12.2004)

PCT

(10) International Publication Number WO 2004/111308 A1

(51) International Patent Classification7: C23G 1/36, C25C 7/00, 1/12

C23F 1/46.

(21) International Application Number:

PCT/EP2004/006115

(22) International Filing Date: 7 June 2004 (07.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

103 26 767.0

13 June 2003 (13.06.2003)

- (71) Applicant (for all designated States except US): ATOTECH DEUTSCHLAND GMBH IDE/DEI: Erasmusstrass 20, 10553 Berlin (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): Kai-Jens [DE/DE]: Lämmerweide 6, 16727 Oberkrämer (DE). LAMPRECHT, Sven [DE/DE]: Drosselschlag 7. 16727 Oberkrämer (DE).
- (74) Agent: ALBRECHT, Thomas; Kraus & Weisert, Thomas-Wimmer-Ring 15, 80539 München (DE).

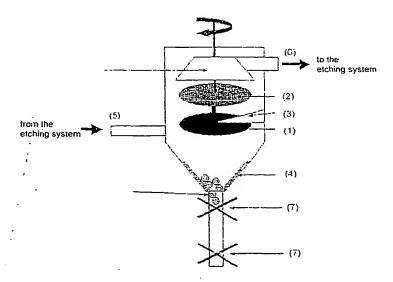
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO. CR, CU. CZ, DK, DM, DZ, EC, EE, EG, ES, FL GB, GD. GE, GH. GM. HR. HU. ID, IL, IN, IS. JP. KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG. MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL. PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW. GH. GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FL FR. GB. GR. HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK. TR), OAPI (BE BJ. CF, CG, CL, CM, GA, GN, GQ, GW. ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR REGENERATING ETCHING SOLUTIONS CONTAINING IRON FOR THE USE IN ETCHING OR PICKLING COPPER OR COPPER ALLOYS AND AN APPARATUS FOR CARRYING OUT SAID METHOD



(57) Abstract: A method for the regeneration of etching solutions containing iron for the use in etching or pickling copper or copper alloys and an apparatus for carrying out the method is described. The method involves feeding the etching solution to be regenerated from the etching system into an electrolysis cell being hermetically scaled or having an anode hood (8), the electrolysis cell comprising a cathode (1), an ihert anode (2), means (3) for removing the electrolytically deposited copper from the cathode and means (4) for collecting the removed copper and applying a potential to the removed copper, wherein the electrolysis cell does not have an ion exchange membrane or a diaphragm.

